Matthew Chan

437-288-4246 chan.matt624@gmail.com github.com/kermattC Portfolio Website

Education

Master of Science (Thesis) - Computer Science **September 2021 – March 2024**
Ontario Tech University *Oshawa, Ontario*

Bachelor of Science (Thesis) - Computer Science **September 2016 – April 2021**
Ontario Tech University *Oshawa, Ontario*

Experience

Research Associate **June 2024 - August 2024**
Ontario Tech University *Oshawa, Ontario*

- Managed data-gathering experiments, directed planning and execution of experiments to ensure accuracy and efficiency.
- Provided clear instructions and requirements to participants, ensuring smooth operation of experiments.

Teaching Assistant **September 2021 – December 2022**
Ontario Tech University *Oshawa, Ontario*

- Developed lab demos and taught programming concepts, provided on-call support for student inquiries.
- Graded midterms, assignments and labs, ensured timely feedback to support student improvement.
- TA for introductory C++ course, Web Development, Software Quality Assurance and Mobile App Development

IT Deskside Support (Co-op) **September 2019 – August 2020**
Toronto Hydro *Toronto, Ontario*

- Provided tech support to clients, ensuring consistent operation of systems.
- Managed hardware inventory, ensured client satisfaction through clear communication on ticket progress.
- Diagnosed and repaired cross-departmental technical issues, including fixing an elevator screen update error.

Projects

Portfolio Website | ***ReactJS, Node.js, Express, AWS EC2, SSL, EmailJS, Nginx, Systemd, SSL*** **June 2024 - July 2024**

- Developed a React full-stack portfolio website showcasing projects, theses, education, and work experience.
- Deployed on AWS EC2 with custom domain, used Nginx for the front-end and systems to manage the Node.js server with SSL.
- Developed a RESTful backend for form submissions, triggering automated email via EmailJS.
- Implemented interactive UI features such as project highlight effects on mouse hover to enhance user experience.

Characterizing Midair Handwriting in Virtual Reality | ***C#, Python, NumPy, TensorFlow, AI*** **June 2022 - May 2024**
MS Thesis

- Developed a data gathering application for Masters thesis project, recorded 480 files of midair handwriting data.
- Implemented Python scripts to clean and standardize data, and automate machine learning processes.
- Trained and tested a total of 84 models, achieved an overall 85% accuracy to predict intention of placing ink in the air.
- Created Python scripts for visualizing and analyzing participant feedback and developed an application to visualize handwriting.

Angle Dependent Visualization and Interaction of Data in AR | ***Swift, XCode*** **September 2020 - May 2022**
BS Thesis

- Created a mobile augmented reality data visualization application with novel angle-dependent interaction methods.
- Used object-oriented programming to extend classes and organize functionality into separate files, improving maintainability.
- Mentored an undergraduate student through pair programming to further develop and refine application's functionality.

Technical Skills

Programming Languages: Python, Java, C#, C++, HTML, CSS, JavaScript, TypeScript, SQL, Dart
Tools & Platforms: Git, Github, Postman, Docker, AWS (S3, EC2), Nginx, JSON, Bash
Libraries & Frameworks: Node.js, React.js, Bootstrap, Numpy, Pandas, Tensorflow, PostgreSQL, MongoDB